

Claims

1. Tool for multi-component injection molding of plastic toothbrush bodies (4) for toothbrushes
comprising two tool halves (1,1') between which the hollow mold spaces (2) are formed and which can be moved apart and can be closed, as well as comprising a transfer device (6) integrated into one of the tool halves (1) as well as immersible therein by which the injection-molded blanks (3) can be transferred into the corresponding hollow mold spaces (2) for injection molding a further component,
characterized in that
for injection molding the first component the hollow mold spaces (2) are formed exclusively by the two tool halves (1,1'),
in that the transfer device (6) in the closed state of the tool is located outside of the area for injection molding the first component, and
that the transfer device (6) can be moved after injection molding of the first component into the area of this injection-molded blank (3), picks up the injection-molded blanks (3), and subsequently transports them into the hollow mold spaces (2) for injection-molding a further component.
2. Tool according to the preceding claim,
characterized in that
the transfer device (6) can be moved linearly.
3. Tool according to claim 2,
characterized in that
the transfer device (6) can be moved within the correlated tool half (1) in a T-shaped or L-shaped guide (7).

4. Tool according to claim 1,
characterized in that
the transfer device (6) can be lifted off the correlated tool half (1).
5. Tool according to claim 1,
characterized in that
the transfer device (6) engages the injection-molded blank (3) on the other
side relative to the tool half (1) correlated with the transfer device.
6. Tool according to claim 1,
characterized in that
the transfer device (6) picks up the injection-molded blank (3) on its head (5)
or neck or grip.
7. Tool according to claim 1,
characterized in that
the transfer device (6) has vacuum suction cups (11) for picking up the
injection-molded blank (3).
8. Tool according to claim 1,
characterized in that
the transfer device (6) delimits the cavity for the further component.
9. Tool according to claim 1,
characterized in that
the one tool half (1) in the area for injection molding the further component
has vacuum suction cups (10) for picking up the toothbrush body (4).

10. Tool according to claim 2,
characterized in that
the toothbrush body (4) is arranged transversely to the moving direction of
the transfer device (6).
11. Tool according to claim 10,
characterized in that
on both sides of the movement line of the transfer device (6) transversely
projecting toothbrush bodies (4) are arranged.
12. Tool according to claim 2,
characterized in that
the toothbrush body (4) is oriented in the movement direction of the transfer
device (6).
13. Tool according to claim 1,
characterized in that
several stations for injection molding of more than two components can be
serviced by the transfer device (6).